REMARKS

The rejections and comments of the Examiner set forth in the Office Action dated November 27, 2002 have been carefully reviewed by the Applicants. Claims 1-20 are currently pending in the application. Claims 1-19 are currently rejected.

Claims 1-15 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coles (US 4956921) in view of O'Keefe et al. (US 5922951) and Talwani et al. (US 6152226). The Applicants respectfully traverse the rejection on the grounds that the proposed combination of Coles and O'Keefe renders the invention of Coles unsatisfactory for its intended purpose, pursuant to MPEP 2143.01.

Coles does not teach "spinning a multi-axis accelerometer device around an axis of rotation....." because spinning the device of Coles would render it incapable of producing the data that it is intended to produce, not "improve the resolution," as maintained by the rejection. The three axis accelerometer of Coles is intended to determine inclination with respect to the Earth's gravitational field. If the device is rotated about an axis, the angular acceleration that is produced will introduce an additional acceleration vector that will prevent determination of the acceleration vector due to gravity.

In addition to distorting the gravitational acceleration measurements taken by the accelerometers, the rotation of the device of Coles will thoroughly confuse the magnetometers that are a part of Coles device. The device of Coles is intended to measure the azimuth and inclination of the borehole with which it is aligned. Rotation

about an axis of any of the magnetometers or accelerometers will prevent the determination of the orientation of the device. Coles teaches that movement and magnetic interference lead to inaccuracies at column 7, lines 17 to 22: "Such inaccuracies may arise in a number of ways such as by the movement of the surveying instrumentation during the process of measurement or the proximity of a variable magnetic interference such as a rotating component of a mud motor." The device of Coles is intended to be in a fixed position when in use, without experiencing rotation or translation.

Claims 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Coles as applied to the claims 1-15 and 17-19, and further in view of Granwere. The Applicants respectfully traverse the rejection on the grounds that the proposed combination of Coles and O'Keefe renders the invention of Coles unsatisfactory for its intended purpose, pursuant to MPEP 2143.01.

In summary, Applicants assert that Claims 1-19 are in condition for allowance and earnestly solicit such action by the Examiner.

Please charge any additional fees or apply any credits to our PTO deposit account number: 23-0085.

Respectfully submitted,

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